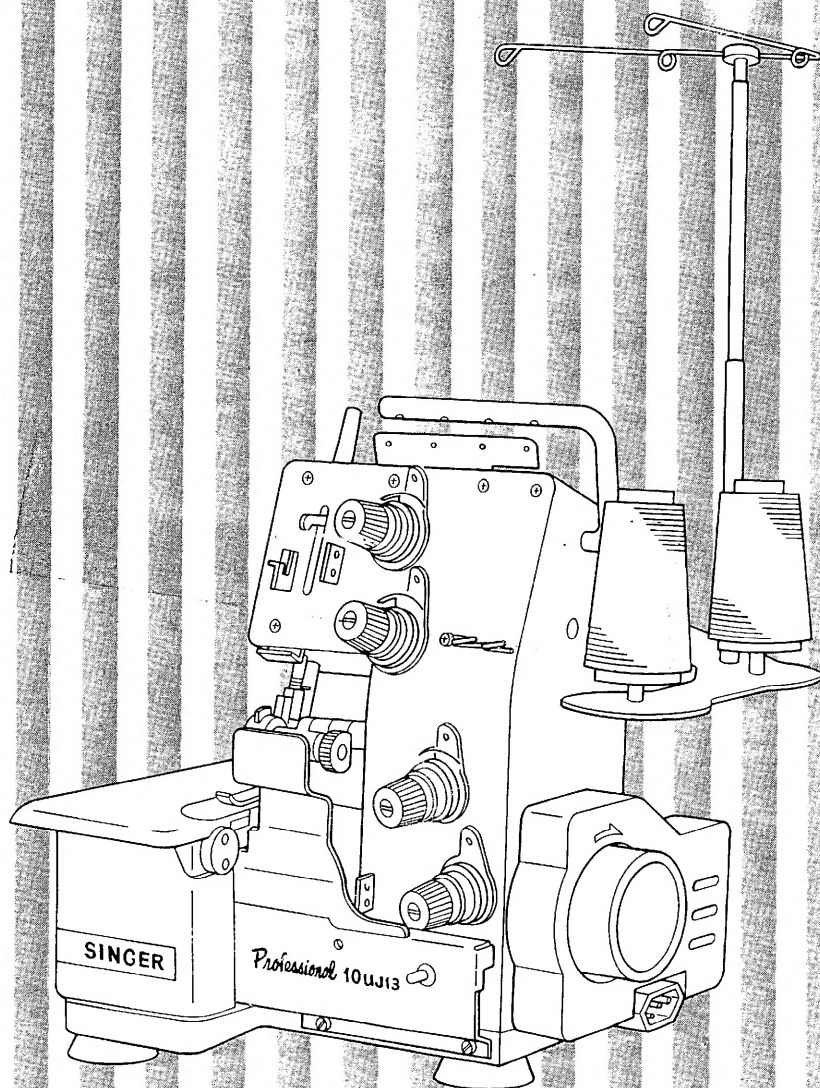


Professional

10UJ13



SINGER

Handle type thread guide

Presser adjusting screw

Thread take-up arm

Thread take-up guide

Upper knife

Presser foot

Throat plate

Side cover

Base plate

Rubber cushion support

Knife cover

Front cover

Spool stand

Double chain stitching
Upper thread tension adjuster

Overedging
Upper thread tension adjuster

Spool stand bar

Spool support plate

Overedging
Lower thread tension adjuster

Double chain stitching
Lower thread tension adjuster

Machine pulley

Terminal box

Belt cover

Double chain
stitching looper

Overedging looper

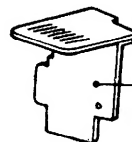
Crank lever

Looper thread
guide spring

* For safety, remove the power supply plug after use.
Be sure not to place anything on the controller.

Sewing margin gauge

Looper section detailed diagram.



PREFACE

Thank you for your purchase of this machine.

Please refer to this booklet for proper use and optimum service of this machine.

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1 SETTING UP THE MACHINE

Figure 1

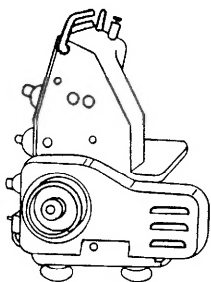


Figure 2

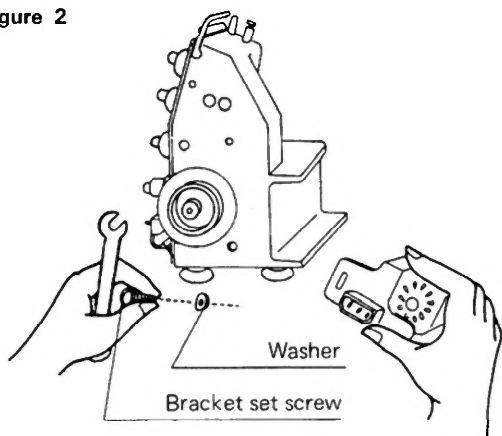


Figure 3

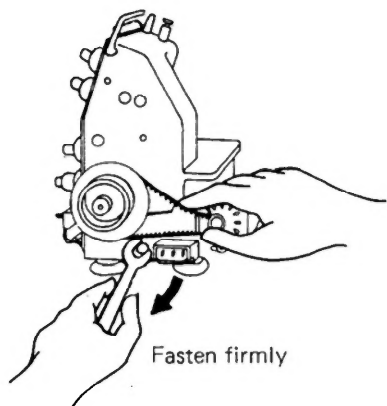
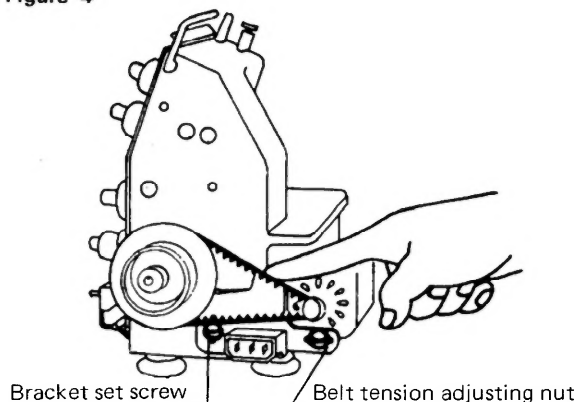


Figure 4

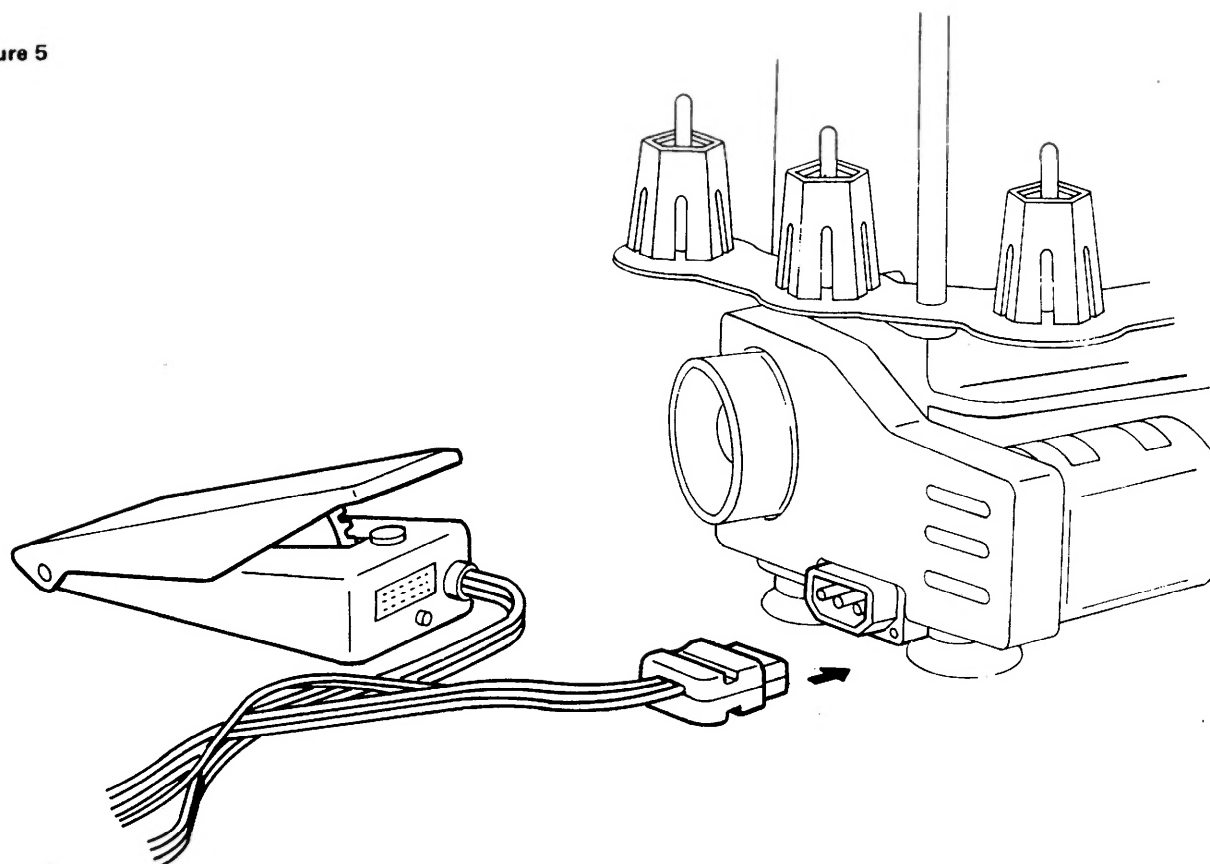


It is important that this sewing machine be set up in the correct manner before use.

1-1 Correct installation of the motor

- Loosen the two belt cover screws and detach the belt cover.
- The bracket set screw (Figure 2), bracket set washer (Figure 2) and the belt are packed in this set and attached to the machine body by fastening the set screw while setting the belt as shown in Figure 3.
Belt tension is considered adequate, if it bends slightly when pressed by finger as shown in Figure 4. When the belt tension is not adequate, further adjust the tension by moving the belt tension adjusting nut (Figure 4) to the right or left.
- Replace the belt cover.

Figure 5



1-2 Connecting the controller to the motor

Connect the controller socket as shown in Figure 5.

Next, insert the plug into the power source. This machine runs faster when the controller pedal is depressed with strong force, and the speed decreases when the controller pedal is lightly depressed.

*For safety, remove the power supply plug after use.

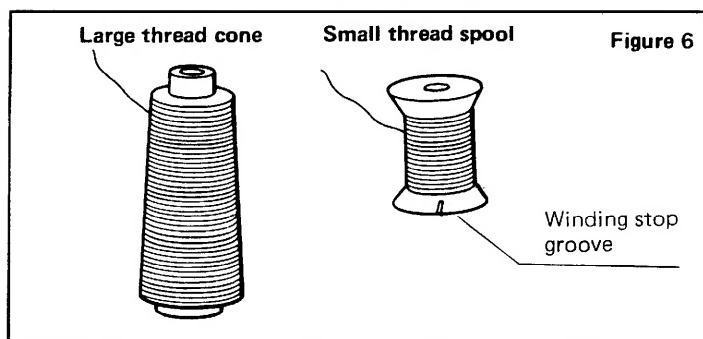
Be sure not to place anything on the controller.

2 OVEREDGING

2-1 How to thread correctly

(1) Spool setting

Large thread cones (Figure 6) are generally used for this machine, however, it is possible to use small thread spools (Figure 6) as well. In this case, it is required that the thread spool be set in such a way that the winding stop groove in on the bottom.



(2) Lower thread (looper thread) insertion

First, open the front cover as shown in Figure 8.

Then, the thread should be inserted in the order as shown in Figure 9. After inserting the thread, close the front cover.

* Threading for overedging is diagramed in red inside the side cover.

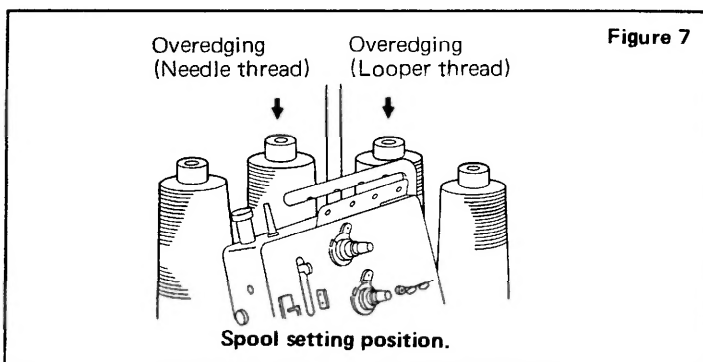
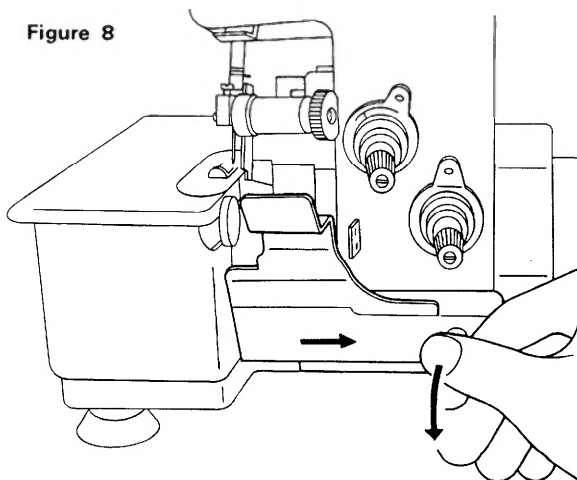
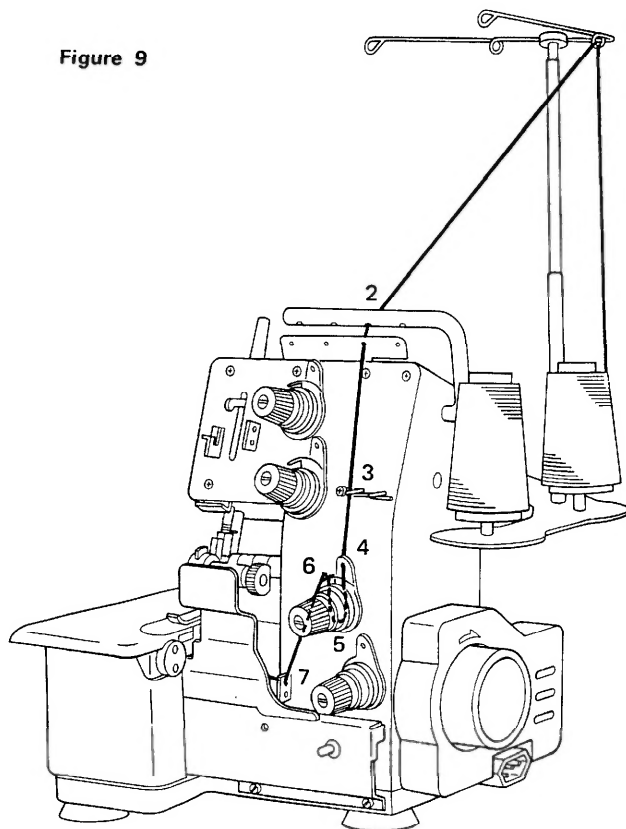


Figure 8



First pull the knob to the right and then push downward.

Figure 9



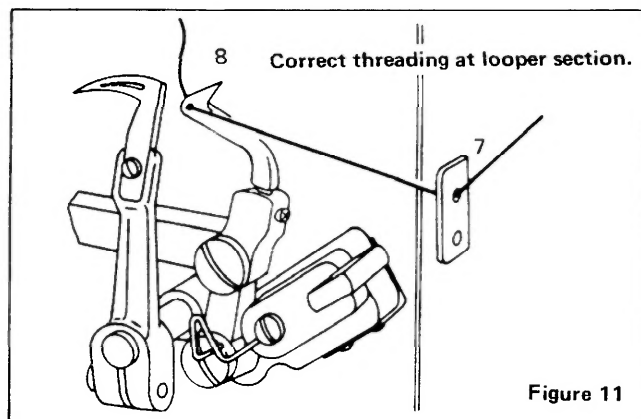
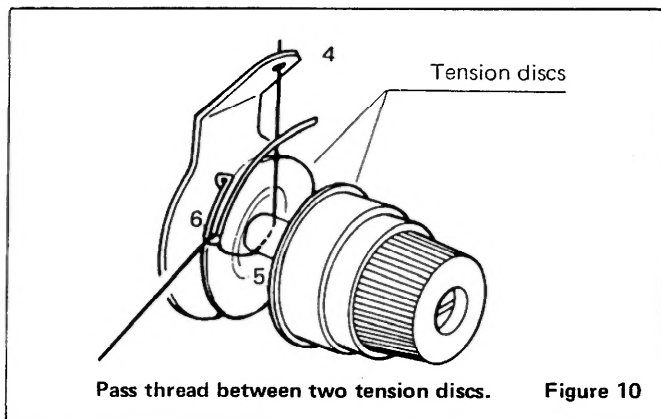
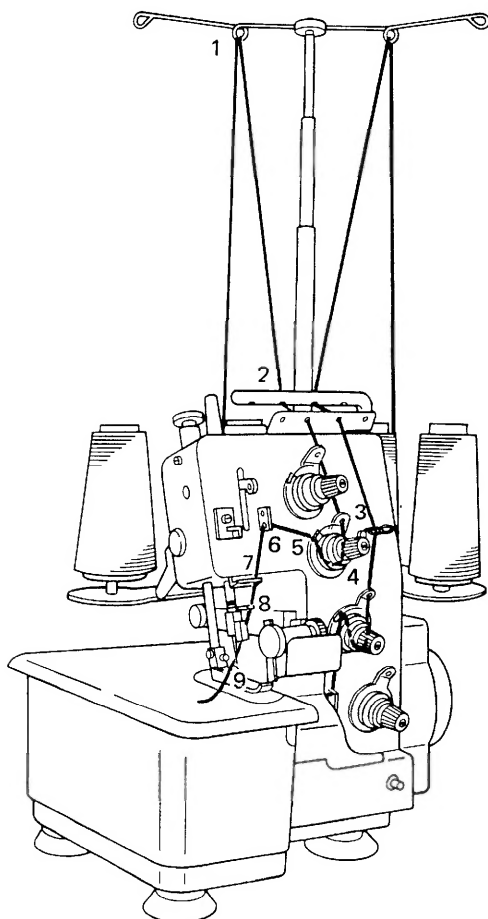


Figure 12



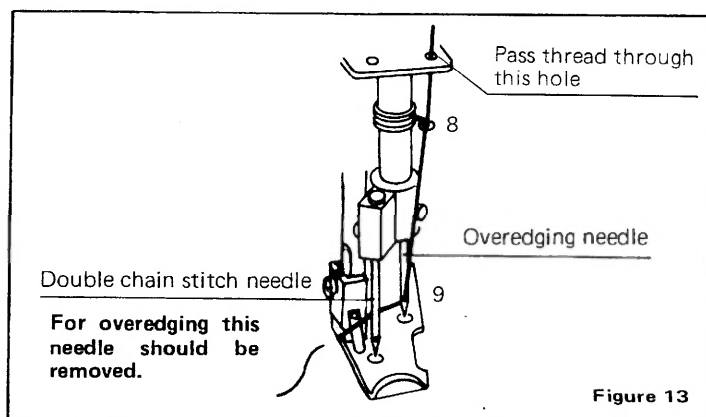
(3) How to thread the upper thread correctly (needle thread)

The thread should be inserted in the order shown in Figure 12.

After inserting the thread from the front to rear through the needle eye while facing the machine, the end of the thread should be pulled out about 10 cm.

* Tweezers are helpful for threading needle eyes.

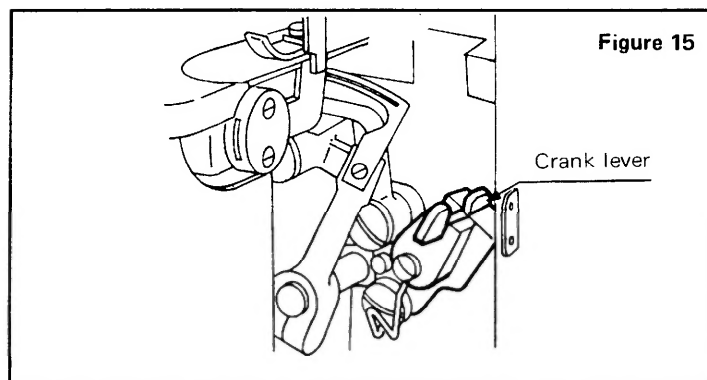
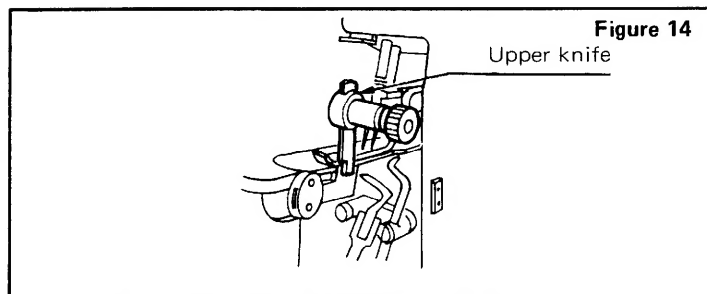
Note: For overedging, the left-hand needle should be removed (see page 14)



2-2 Preparation and checking prior to sewing

At the time of shipment, this machine is set for interlocking. However, please recheck the machine again in the order given below.

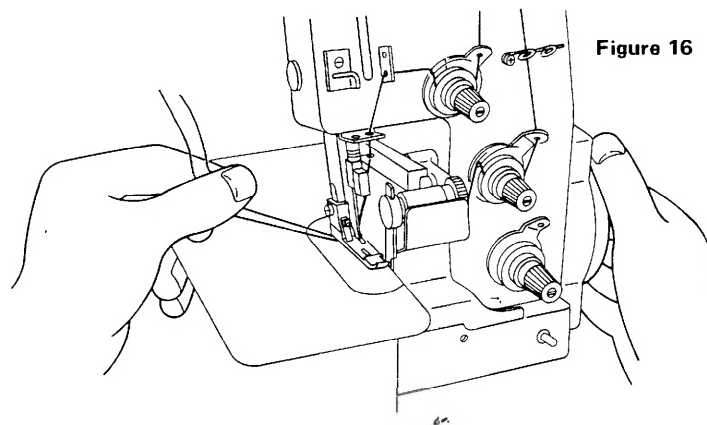
- (1) Is the tip of the blade on the upper knife facing in a downward direction? (The knife should be in the position to cut the cloth.) (Figure 14)
- (2) Is the crank lever in the slot? (Figure 15)
- (3) If the crank lever is not in the slot, rotate the machine pulley by hand placing the needle in the lowest position. At this point, the crank lever may be set into the slot by pushing downward, thus allowing the looper for overedging to operate.



2-3 Sewing

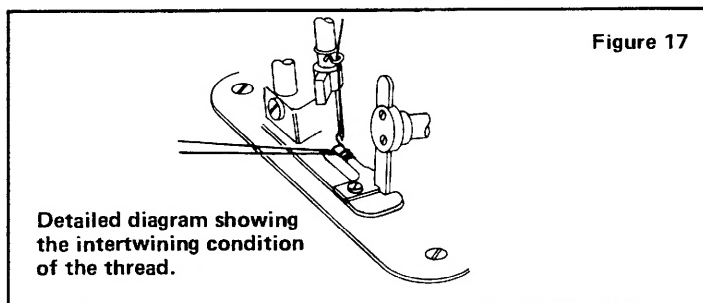
- (1) After the completion of threading, hold the ends of both the upper and lower threads with the fingers of the left hand creating a minor tension as shown in Figure 16 and turn the machine pulley with the right hand in the clockwise direction.

Confirm that both threads are intertwining. Then, set the cloth, and begin to sew. (Figure 17)

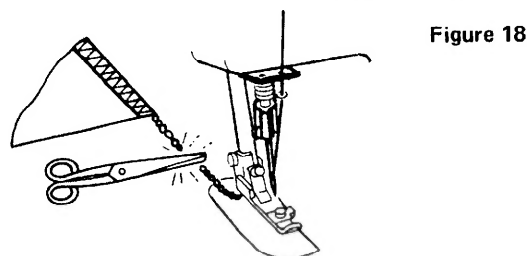


- (2) If the tension balance of the upper and lower threads is not satisfactory, it is possible that puckering will appear on the cloth or that the seams will become irregular.

Refer to the section "Thread tension adjustment". (Page 11)



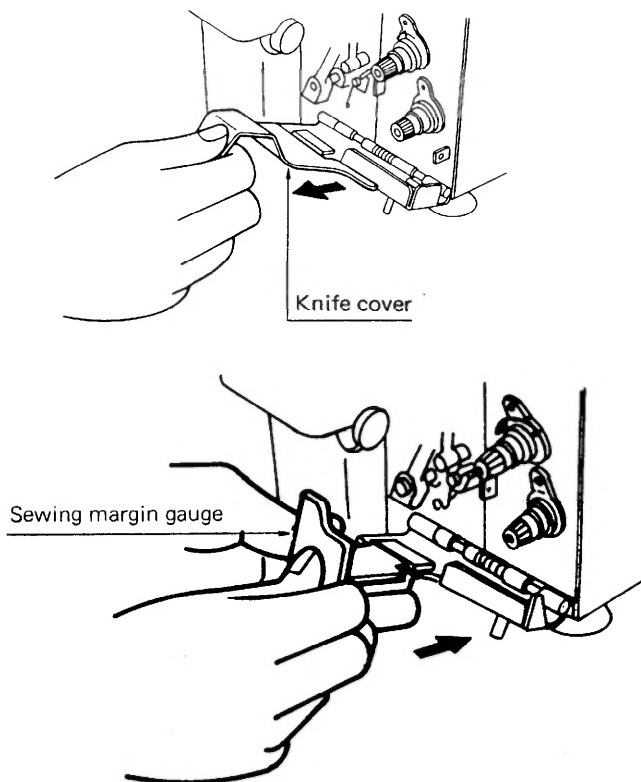
- (3) After the seam is completed, continue sewing about 3–5 cm at the end of the cloth and cut the threads as shown in Figure 18.



3

DOUBLE CHAIN STITCHING (STRAIGHT SEAMING)

Figure 19



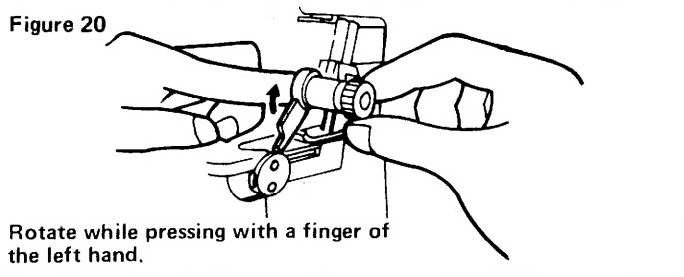
3-1 Changing from overedging to double chain stitching

It is required that all parts which are set for overedging be changed for double chain stitching in the order given below.

[Changing steps]

- (1) Open the front cover and remove the knife cover and set the sewing margin gauge. Align the two round marks in the same direction (Figure 19).

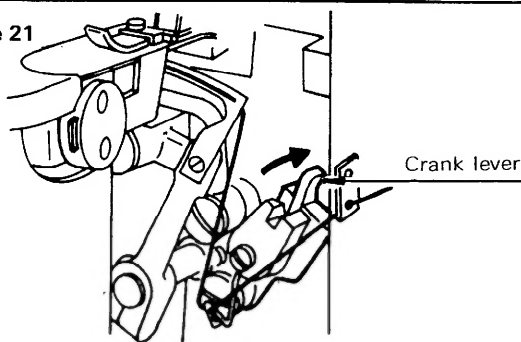
Figure 20



Rotate while pressing with a finger of the left hand.

- (2) As shown in Figure 20, press the knife holder with a finger of the left hand and rotate the upper knife holder knob slightly upward with the right hand. Then release the finger and rotate the knob with the right hand until the rotation comes to a stop with a click.

Figure 21



- (3) Rotate the machine pulley by hand and when the needle reaches its lowest point, remove the crank lever from the slot.
Then, the overedging looper will not operate. (Figure 21)

- (4) Remove needle from right side of needle clamp and insert needle in left hand needle hole in the clamp. (See Page 14)

3-2 How to thread correctly

(1) Method for inserting upper thread

It is required that the thread be inserted in the order shown in Figure 22.

After inserting the thread from the front to the rear through the needle eye while facing the machine, the end of the thread should be pulled out for about 10 cm from the needle.

*Tweezers are helpful for threading needle eyes.

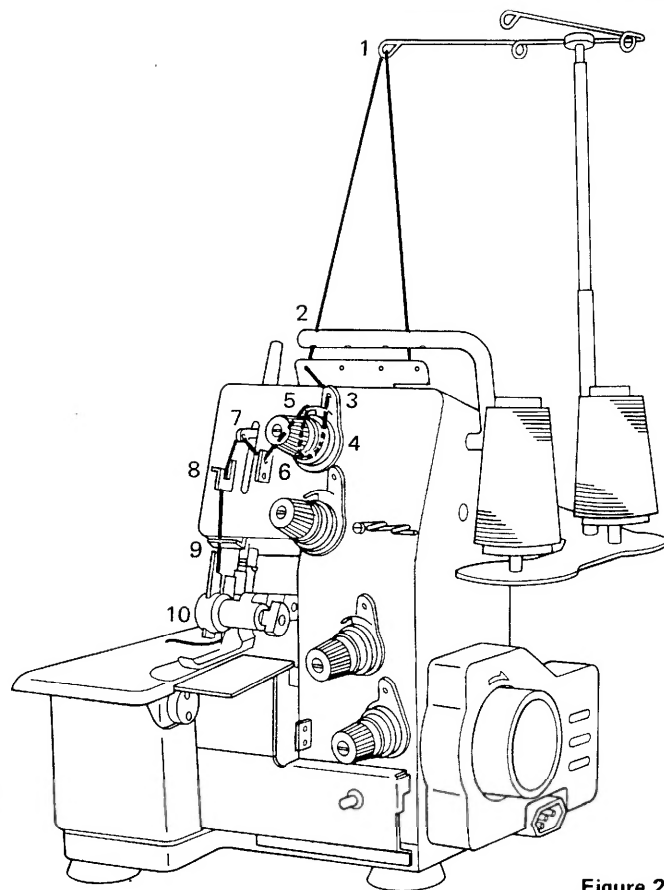
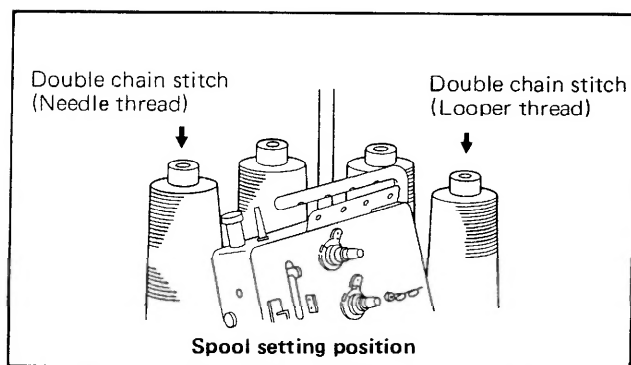


Figure 22

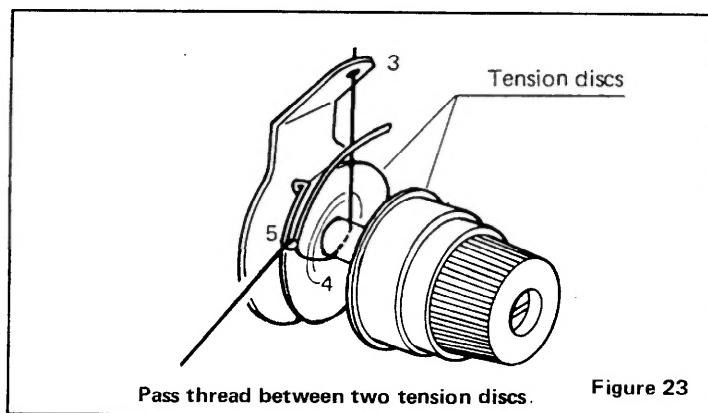


Figure 23

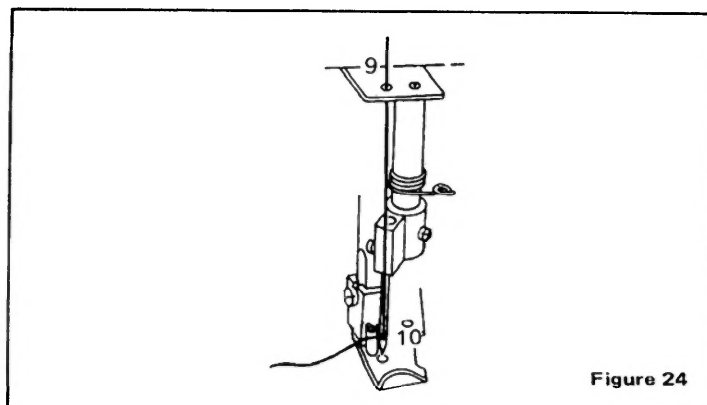
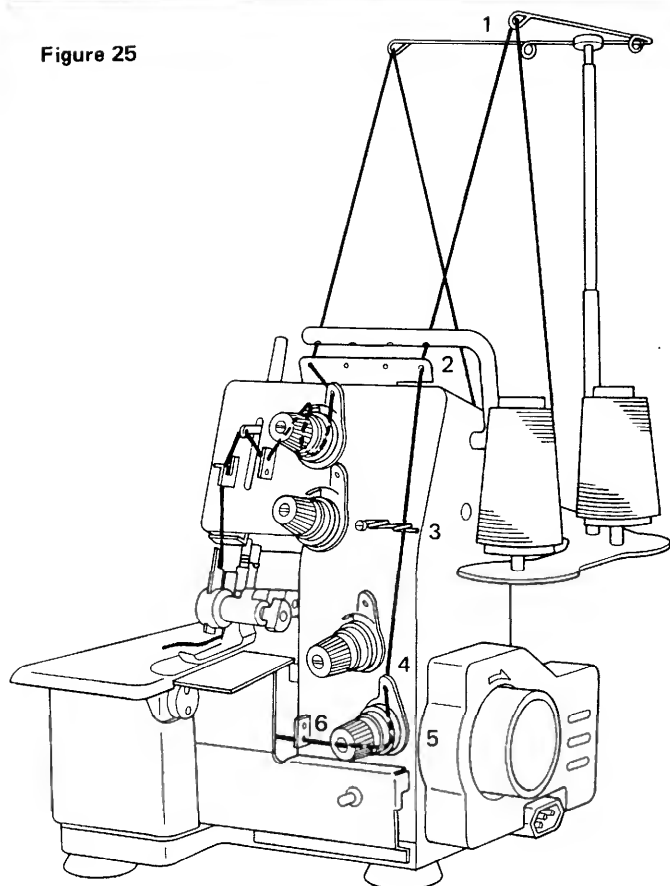


Figure 24

Figure 25

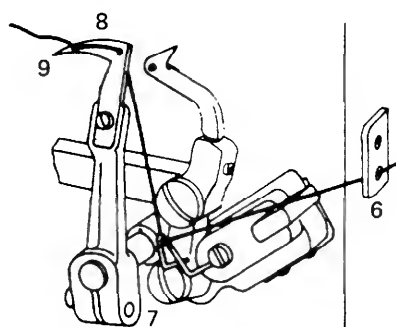


(2) Method for inserting lower thread

Open the front cover, then insert the thread in the order as shown in Figures 25 and 26. The end of the lower thread also should be pulled out about 10 cm. After inserting the thread, close the front cover.

In this case, the thread that has been pulled out may be left as it is. There is no need to pull it out to the surface of the throat plate.

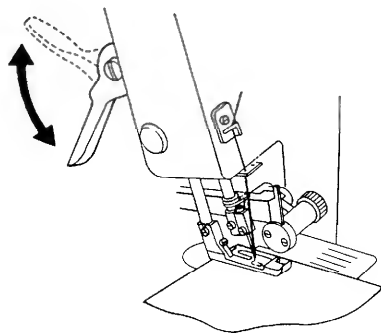
Figure 26



Correct threading at looper section

* Threading for double chain stitching is diagramed in blue also inside the side cover.

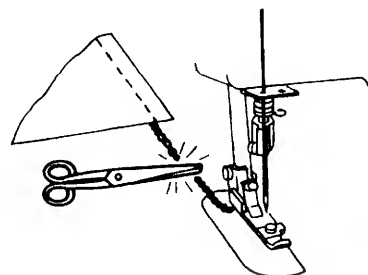
Figure 27



3-3 Sewing

- (1) Set the cloth as shown in Figure 27. When beginning to sew, the first few stitches should be made slowly.
- (2) If the tension balance between the upper and lower threads is not satisfactory, puckering may result in the cloth or the seams will become irregular. Please refer to the section "Thread tension adjustment". (Page 11)
- (3) After completing the seam, sew 3–5 cm of additional stitching from the end of the cloth as shown in Figure 28 before cutting. With regard to disposal of the thread chain, either tie the threads at the edge of the cloth or, if the cloth is of knitted material, fold back and fix with a crochet needle. In case the seam needs to be strengthened, the same position should be sewn twice in a parallel line.

Figure 28



4 INTERLOCKING (SAFETY STITCHING)

4-1 Changing from double chain stitching to interlocking

All parts which are set for double chain stitching must be changed to interlocking in the order given below.

[Changing steps]

- (1) Open the front cover and remove the sewing margin gauge and insert the knife cover. Align the two round red marks in the same direction (Figure 29 & 30).

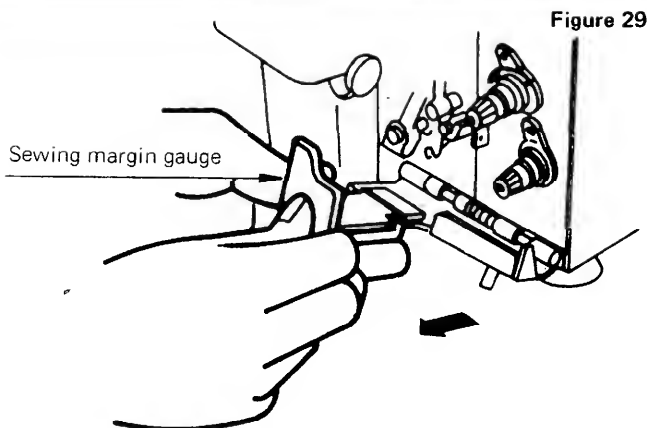


Figure 29

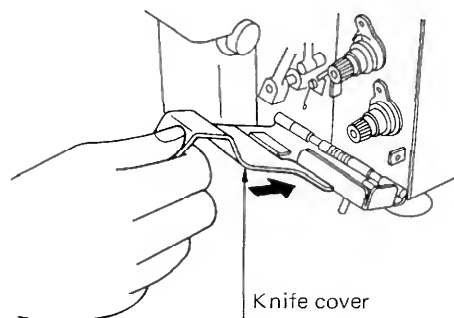


Figure 30

- (2) As shown in Figure 31, pressing the knife holder with a finger of the left hand, rotate the upper knife holder knob slightly forward with the right hand. Then release the finger of the left hand, rotate the knob until it comes to a stop with a click. The tip of the blade on the knife is then facing downward and is in the operating position. It will then be in a position to cut the cloth.

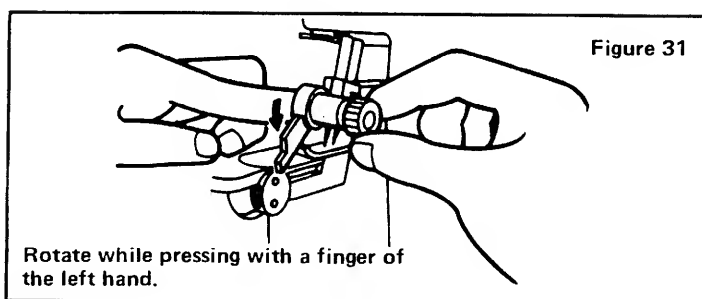


Figure 31

- (3) Rotate the machine pulley by hand and when the needle is at its lowest point, pull down and set the crank lever. Thus, the looper for overedging becomes operational. (Figure 32)

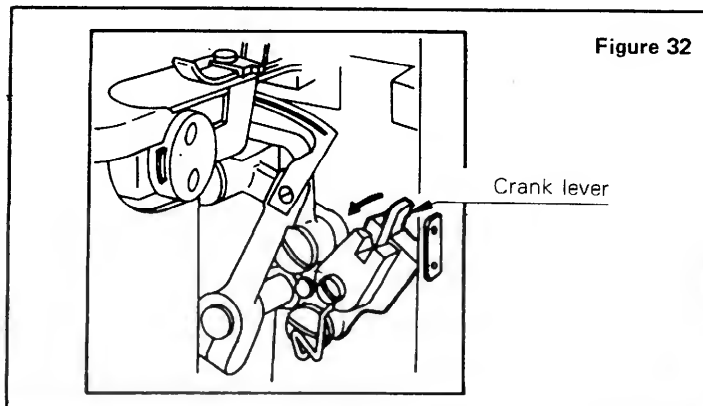


Figure 32

- (4) Insert overedging needle in right side of needle clamp. (See Page 14)

4-2 How to thread correctly

Overedging and double chain stitching can be done simultaneously by using all four threads as shown in Figure 33.

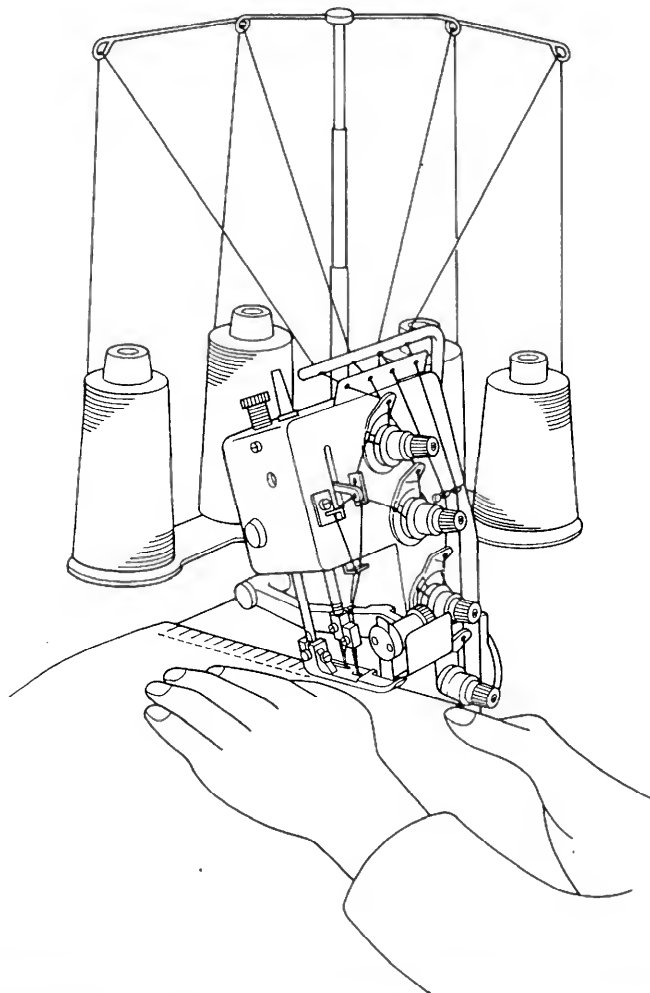
*Concerning threading, refer to the section "How to thread correctly" for both overedging and double chain stitching. (Page 3 & 7).

4-3 Sewing

The sewing of interlocking is the same as overedging and double chain stitching. Refer to the section "Sewing" of both overedging and double chain stitching. (Page 5 & 8)

*Concerning thread tension, refer to the section "Thread tension adjustment". (Page 11).

Figure 33



5 THREAD TENSION ADJUSTMENT

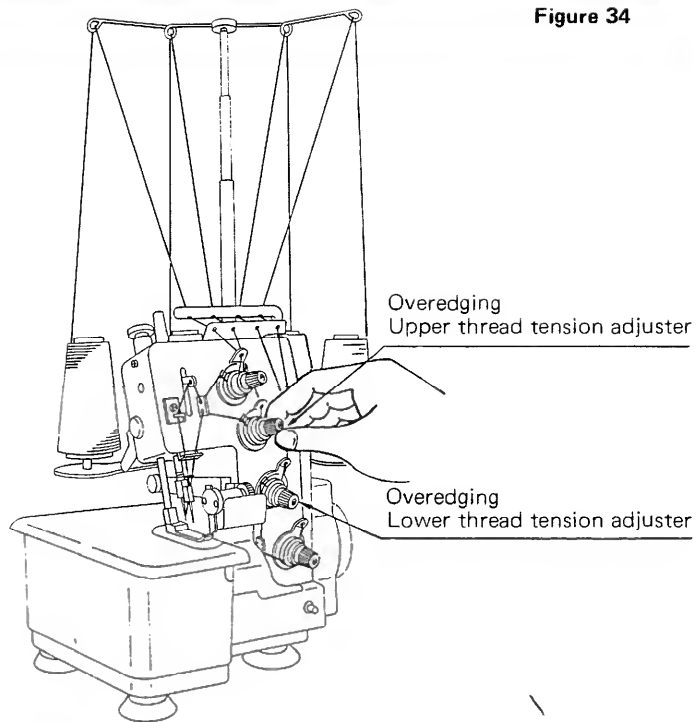
5-1 How to adjust the overedging seams

Thread tension adjustment will differ according to the type of cloth, thickness, and thread being used.

Adjust the tension using the upper and lower thread tension adjusters while watching the seams. (Figure 34)

Thread tension may be increased by turning in a clockwise direction.

Figure 34



- (1) When the tension of the lower thread is too heavy (Figure 35), loosen the lower overedging thread tension adjuster.
- (2) When the tension of the upper thread is too heavy (Figure 36), loosen the upper overedging thread tension adjuster. When the stitching seams appear as shown in Figure 37, the tensions are satisfactory.

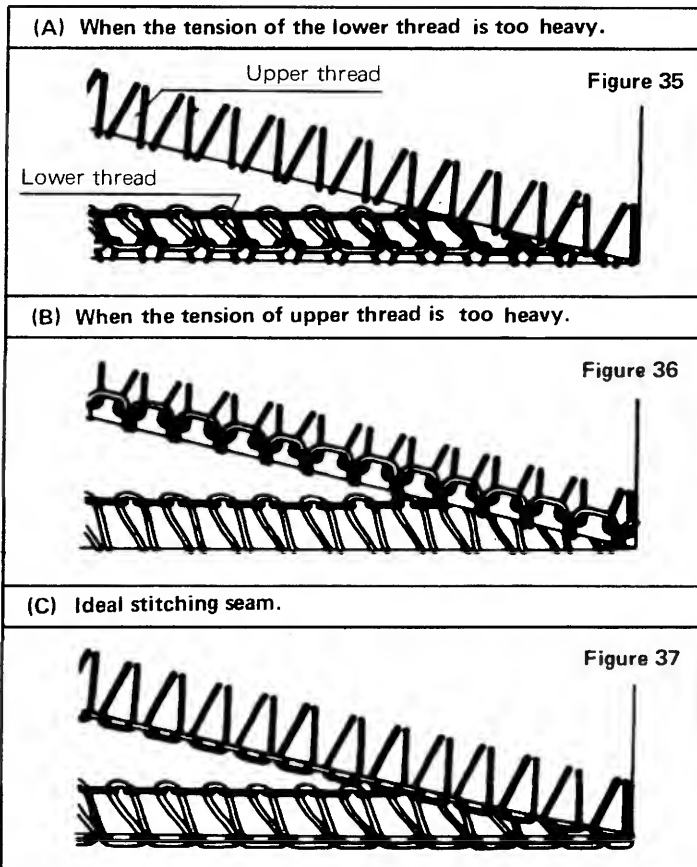
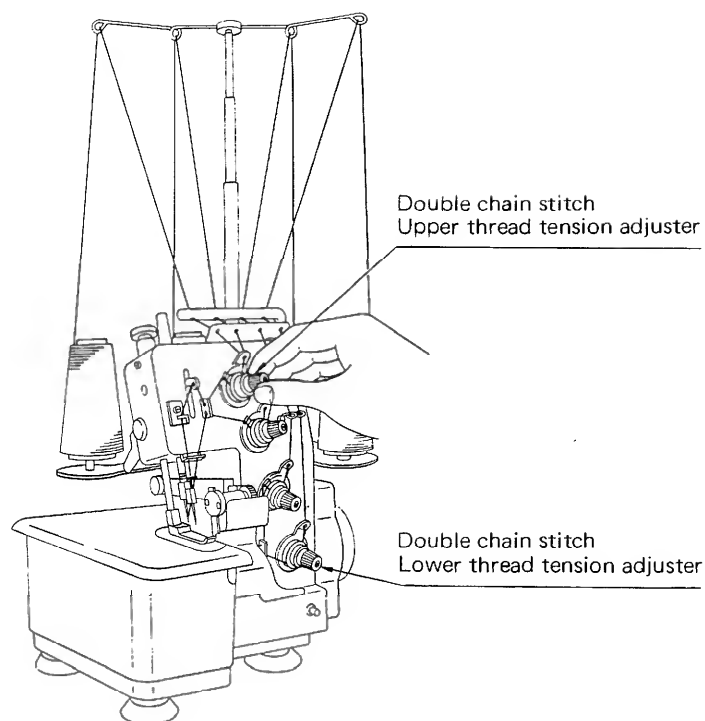


Figure 38

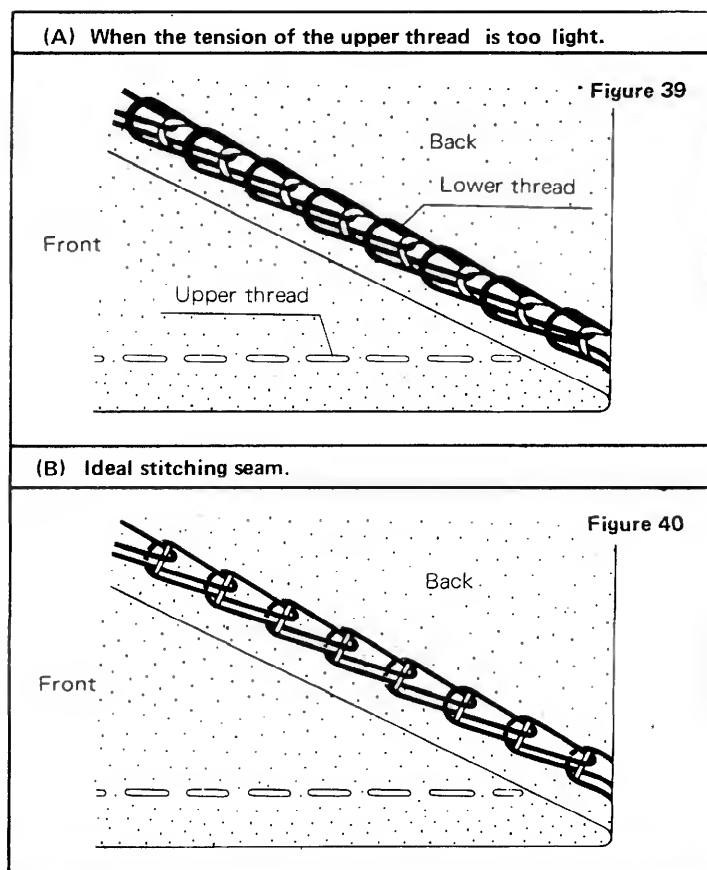


5-2 How to adjust the double chain stitching seams

Thread tension adjustment will differ according to the type of cloth, thickness, and thread being used.

Adjust the tension using the upper and lower thread tension adjusters while watching the seams. (Figure 38)

Thread tension may be increased by turning in a clockwise direction.



When sewing light-weight or knitted materials, the seams can be neatly finished if the material is slightly pulled with the left hand. (Figure 41)

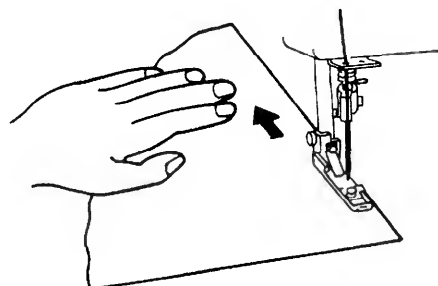


Figure 41

6

PRESSER FOOT ADJUSTMENT

The presser foot pressure of this machine is adjusted for standard (medium) thickness. Adjust only in the case when very thin or very thick cloth is being sewn.

Sew thin cloth with less pressure, and, thick cloth with more pressure.

*Turn presser adjusting screw clockwise for more pressure and counterclockwise for less pressure.

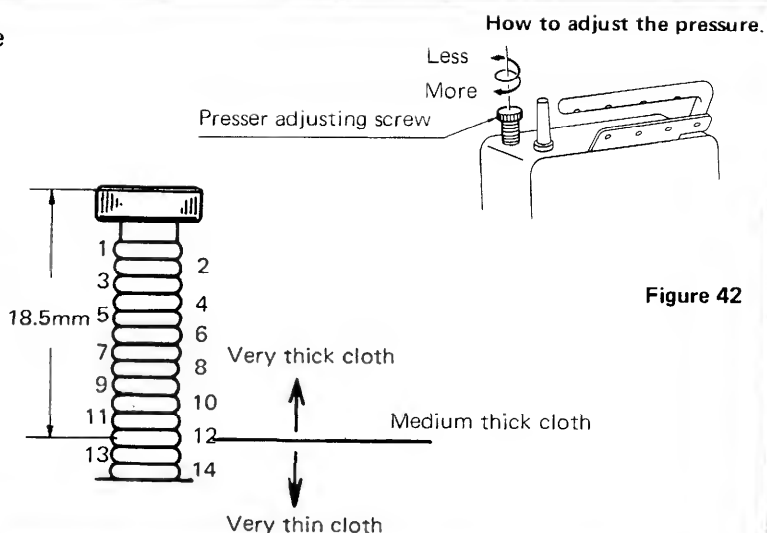


Figure 42

7

ADJUSTING STITCH LENGTH

- (1) Holding the machine pulley with the right hand, grasp the heart-shaped driver (included in the accessories box) with the left hand and loosen the feed regulator fixing screw. The feed regulator fixing screw can be loosened by turning the machine pulley in a counterclockwise direction while pressing the fixing screw with the heart-shaped driver.
- (2) Set the graduation on the feed regulator knob to the indicator. The larger the number on the feed regulator knob, the larger the stitches will be.
- (3) After completing adjustments, firmly tighten the feed regulator fixing screw.

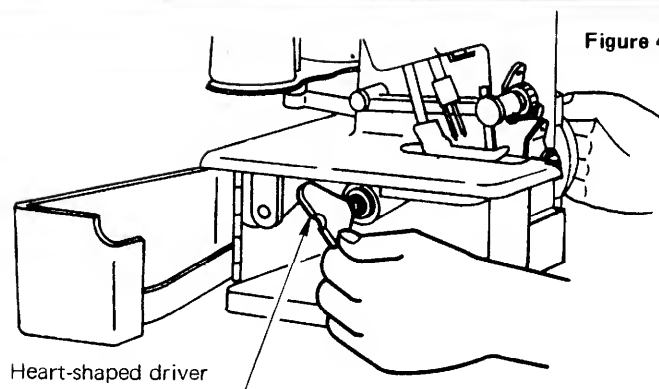


Figure 43

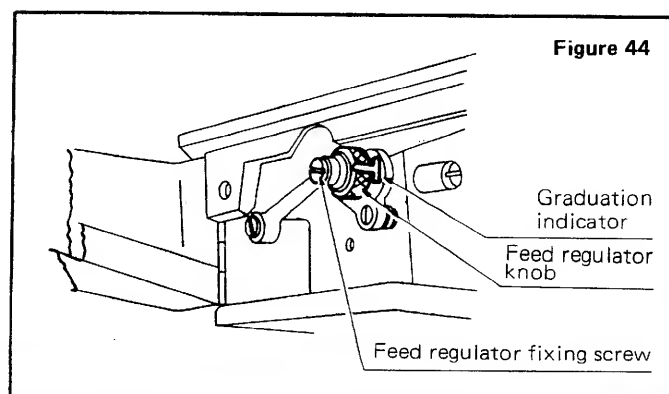


Figure 44

8 SEWING SPEED

The machine has a maximum speed of 1,500 SPM. The speed can be controlled by pedal depression on the controller.

*The electric motor used for this machine is a special motor designed for use only with this machine and should not be used for other purposes.

9 HOW TO INSTALL THE NEEDLE

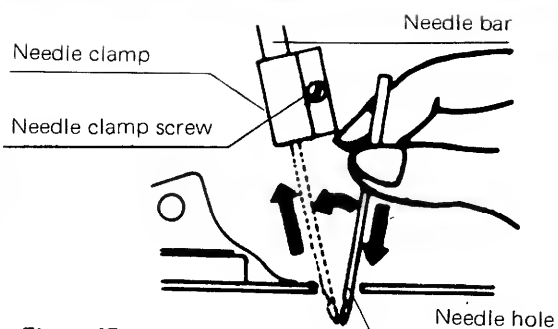


Figure 45

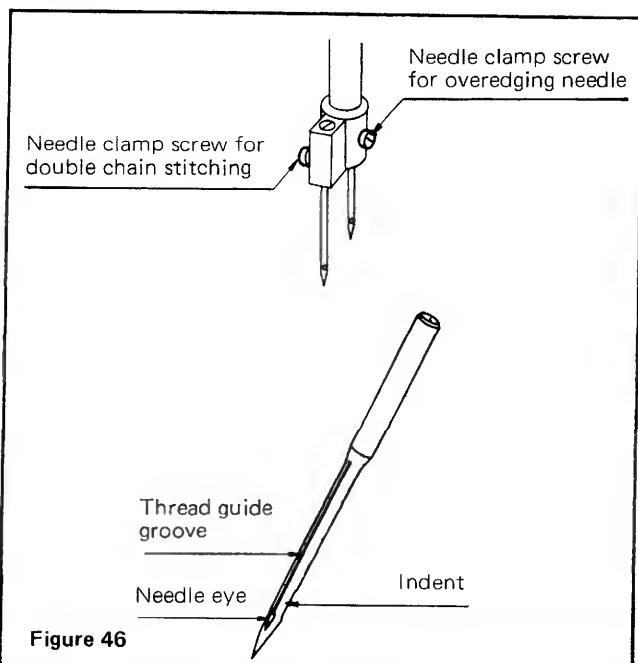


Figure 46

With regard to the needles for this sewing machine, SINGER needle Cat. No. 2053 90/14 can be used for both double chain stitching and overedging.

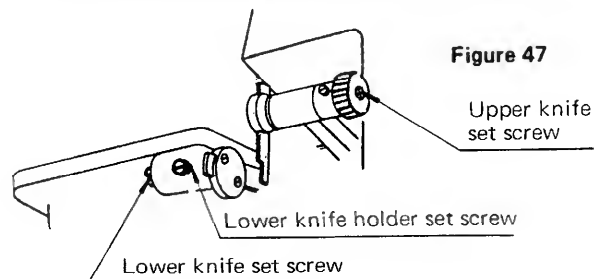
- (1) For needle installation, first turn the machine pulley so as to raise the needle bar up as far as it will go.
- (2) Next, loosen the needle clamp screw (Figure 45), insert the tip of the needle into the needle hole (Figure 45) on the presser foot, and insert the needle into the needle hole of the needle clamp as far as it will go.
- (3) Firmly tighten the needle clamp screw.

*For the direction of inserting the needle, it is requested that the needle be set so that the thread guide groove is facing the front when facing the machine as shown in Figure 46.

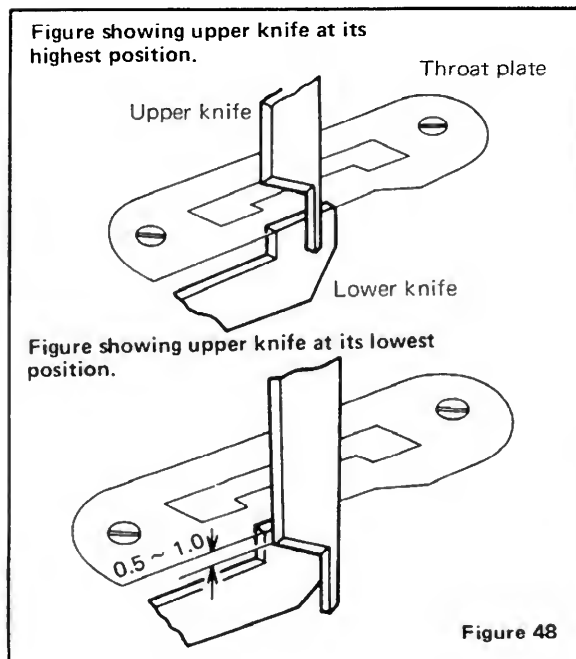
10 REPLACING THE CUTTING KNIVES

The knife should be changed only after removing the plug from the electric power source.

- (1) The upper knife may be changed after loosening the upper knife set screw and the lower knife may be changed after loosening the lower knife holder set screw and the lower knife set screw as shown in Figure 47.



- (2) The position of the lower knife must be arranged in such a way that it can be set in the indentation for the knife in the throat plate as shown in Figure 48.
- (3) The normal position for setting the upper knife can be determined when the upper knife reaches its lowest point during operation. The front tip of the cutting edge of the upper knife should be about 0.5–1.0 mm below the surface of the tip of the cutting edge on the lower knife. (Figure 48)



11 LUBRICATION

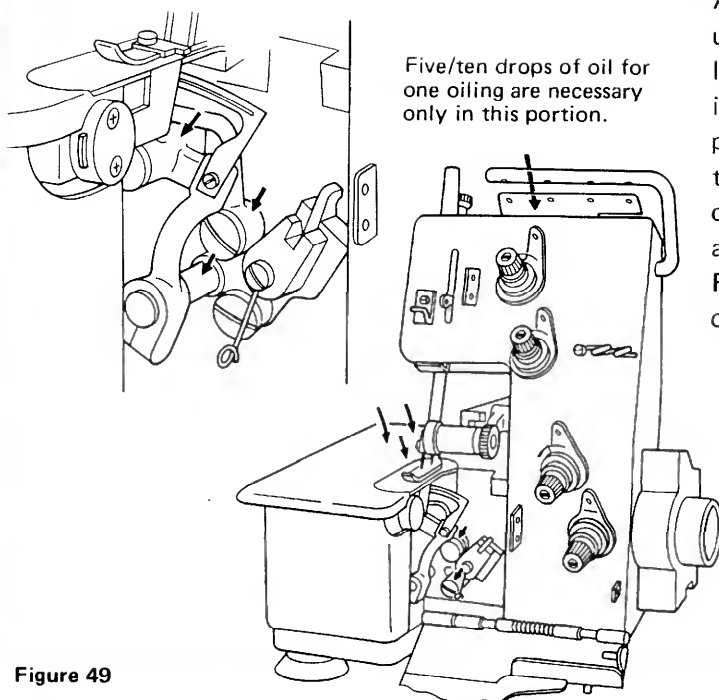


Figure 49

As special materials (oil impregnated metal) are used for parts of this machine actual additional lubrication is negligible. However, since oil wick is provided for the inner sections, oil should be provided no more than once or twice per month to those parts (6 Positions) marked in red which can be seen from the outside of the machine, in addition to those parts (5 Positions) shown in Figure 49. 1-2 drops of oil is sufficient for one oiling.

12 CHECKING AND ADJUSTMENT

This machine is so designed that there is absolutely no need for complex professional adjustments.

The following five examples are the only possible instances where difficulties are likely to occur through lack of fundamental adjustments.

These points should be carefully considered when operating this machine.

- A) When the machine does not operate —
 - Is the electric cord properly inserted into the plug receptacle?
 - Is there any slipping in the set position of the motor?
 - Is the belt loose?
- B) When the thread breaks —
 - Have the threads been inserted correctly?
 - Is the thread tension too strong?
 - Is the needle bent?
 - Is the presser pressure adequate?

Are there any problems with regard to the type of thread being used?

Has the needle been inserted correctly?

- C) When the needle breaks —
 - Is the needle touching against the throat plate or presser foot?
 - Has the needle been inserted correctly?
- D) When the seams are irregular —
 - Is the needle bent or the point worn?
 - Has the needle been inserted correctly?
 - Have the threads been inserted correctly?
 - Is the presser pressure sufficient?
- E) When the seams are not satisfactory —
 - Is the tension adjustment of the upper and lower threads satisfactory?
 - Have the threads been correctly inserted?

13 APPLICATIONAL NOTES

13-1 How to set the presser foot for sewing knitted materials (used only for double chain stitching)

This presser foot is very convenient for sewing cloth parts with many curves.

- (1) First, raise the presser bar lifter, then remove the presser set screw (Figure 51).
- (2) After changing the presser foot firmly tighten the set screw after confirming that the needle holes are in the proper position.

Presser foot for sewing knitted material.

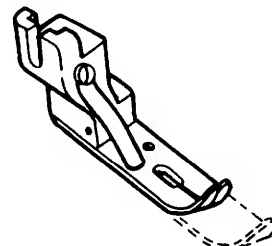


Figure 50

13-2 Double-hinged presser foot

Double-hinged presser foot, part number SUJ-8101-00A, illustrated in Figure 50(A), is recommended for overedging and safety stitching when sewing over cross seams and for better formation of the stitching at the start and finish of the seams of heavier cloth materials.

This presser foot is optional and must be ordered separately.

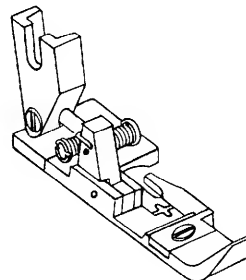


Figure 50(A)

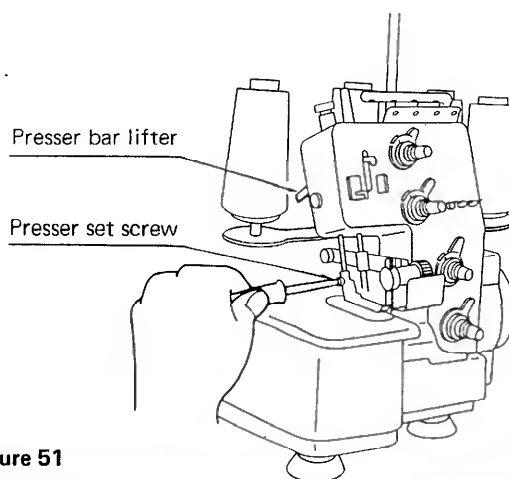
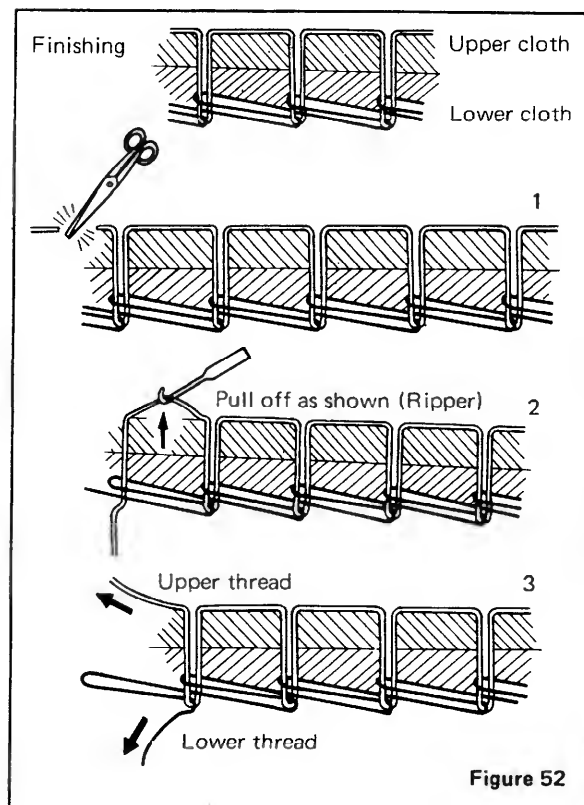


Figure 51

13-3 Removing stitches of double chain stitching seams

When loosening seams, remove the threads in the reverse direction of sewing as shown in Figure 52.



14 SUPPLEMENT

Detailed list of contents

- 1) Machine
- 2) Motor
- 3) Controller set
- 4) Vinyl cover
- 5) Instruction booklet
- 6) Accessory box

(Contents)

Screw driver

Spanner (for motor bracket)

Needles

Upper knife

Tweezers

Cleaning brush

Oil

Heart-shaped driver (for adjusting stitch length)

Sewing margin gauge

Presser foot for knitted material

Net

It is recommended that the pocket on the side cover be used for storing the accessories at the time of using the machine as shown in Figure 53.

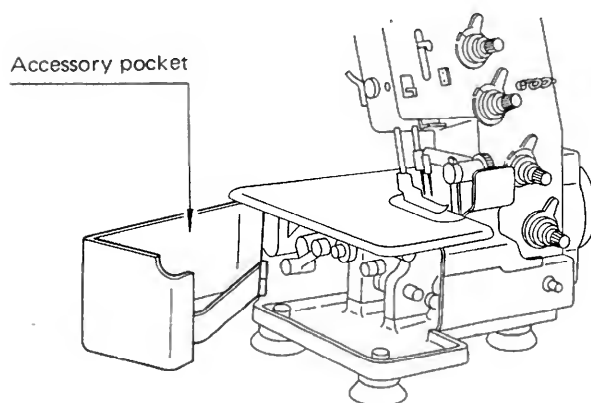


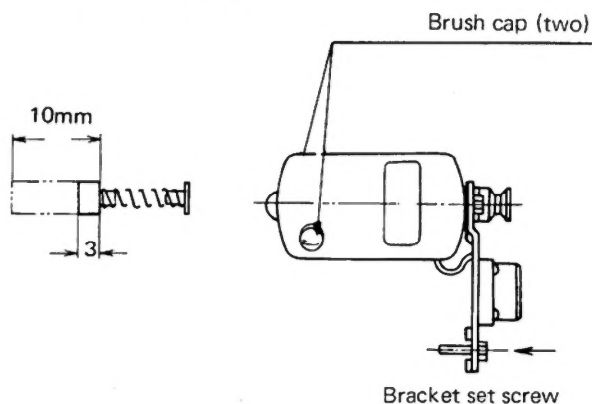
Figure 53

15 CHANGING THE CARBON BRUSHES OF THE MOTOR

Two carbon brushes (in two positions) are used for the motor on this sewing machine. The carbon brushes should be changed according to the following method, as they will wear after long hours of use.

- A) Period for changing carbon brushes
The carbon brushes should be changed when they have worn too short for contact (see carbon brush figure).
- B) First remove the motor. Remove the brush caps (see figure of motor), and replace the brushes.

Figure of carbon brush



* The carbon brushes should be changed when the brush section has worn down to approximately 3 mm as shown in the figure.

* Carbon brushes may be purchased from any sewing machine shop or electrical appliance shop.

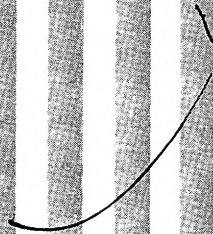
Note: Special care should be taken with regard to the aforementioned points as failure to change the brushes may result in sparks emitting from the motor which will cause damage to the motor.

16 SPECIFICATIONS

Item	Specification
Overedging width	4 m/m
Distance between needles	3 m/m
Stitch length (feed)	1 ~ 6 m/m
Needle bar stroke	27 m/m
Knife movement	6 m/m
Presser foot lift	3.5 m/m
Feed dog height	0.7 m/m
Needles	SINGER needle Cat. No. 2053, 90/14
Number of threads	4
Method of lubrication	Semi-automatic oil wick lubrication
Machine dimensions	Length 250 m/m x Breadth 250 m/m x Height 310 m/m
Weight of machine	Approximately 10 kgs (with motor and controller)

17 TABLE SHOWING RELATIONSHIP BETWEEN THREAD AND CLOTH

No.	Type of cloth	Use	Type of thread	Length of stitch
1	Thin cloth (organdy, thin tricot, taffeta, silk, crepe, suit lining)	Double chain stitching (straight seaming)	Cotton #80 ~ #100 Silk #80 ~ #100	2.0 m/m ~ 3.0 m/m
		Overedging	Cotton #80 ~ #100 Silk #80 ~ #100	3.0 m/m ~ 4.0 m/m
2	Ordinary cloth (cotton, tricot, linen, satin, cloth in general)	Double chain stitching	Cotton #60 ~ #100 Silk #50 ~ #100	2.0 m/m ~ 3.0 m/m
		Overedging	Cotton #60 ~ #100 Silk #50 ~ #100	3.0 m/m ~ 4.0 m/m
3	Thick cloth (tweed, denim, suit cloth)	Double chain stitching	Cotton #40 ~ #60 Silk #40 ~ #60 Tetron and woolly nylon threads	2.0 m/m ~ 4.0 m/m
		Overedging	Cotton #40 ~ #60 Silk #40 ~ #60 Tetron and woolly nylon threads	3.0 m/m ~ 5.0 m/m
4	Knitted cloth (knitted goods, knitted cloth)	Double chain stitching	Cotton #40 ~ #50 Silk #30 ~ #40 Tetron, woolly nylon and transparent nylon threads	2.0 m/m ~ 4.0 m/m
		Overedging	Woolly nylon and tetron threads * Very thin woollen thread may be used as the lower thread.	3.0 m/m ~ 5.0 m/m



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